

REMARKS

Claims 1-58 remain in the case. Claims 16-17 and 33-58 have been withdrawn by the Examiner due to the Requirement for Restriction. Claims 1-15 and 18-32 are believed to be under consideration.

The allowability of Claims 24-26 and 29-32 is noted with sincere appreciation.

The Examiner's recognition that Claim 1 is a generic or linking claim is also noted with appreciation. Due to the presence of a generic claim, these Remarks will address the rejections under 35 U.S.C. § 102(b) and § 103(a) before discussion of the Requirement for Restriction. Because of the presence of the generic claim, and in order to expedite prosecution in this case, these Remarks apply to all of claims in the case, including those that have been withdrawn.

It is further noted with appreciation that both the elected species, siloxanes, and a non-elected species, halohydrocarbons, appear to have been examined.

Rejections under 35 U.S.C. 112, second paragraph

Claims 10, 21, and 22 stand rejected under section 112, second paragraph, as allegedly indefinite. The Examiner supports this rejection by asserting that the symbol "R" in these claims lacks antecedent basis. This rejection is respectfully traversed. Regarding the symbol "R," Claim 10 depends on Claim 5, which in turn depends on Claim 2, where the halohydrocarbon is defined as R_nCX_{4-n} , and "R" is further defined, thus providing antecedent basis for the symbol "R." The situation for Claims 21 and 22 is analogous: they both depend on Claim 18, which in turn depends on Claim 2. In all cases, the symbol "R" has antecedent basis in a claim from which the rejected claim depends. Therefore, antecedent basis does exist for "R" in all of Claims 10, 21, and 22. This rejection fails to establish a *prima facie* case of indefiniteness under section 112, second paragraph, and it should be reconsidered and withdrawn.

Claims 15 and 27 stand rejected under section 112, second paragraph, as allegedly indefinite. The Examiner supports this rejection by asserting that the term "partially halogenated aluminoxane" lacks definition. This rejection also is respectfully traversed. The meaning of the term "partially halogenated aluminoxane" in Claims 15 and 27 is clear. First,

both of these claims ultimately depend from Claim 1, which states that there are in the range of about 0.5 mole % to about 15 mole % halogen atoms present in the composition relative to aluminum atoms. In addition, the Specification specifically states that in a partially halogenated aluminosiloxane, halogen atoms are coordinated to "some of" the aluminum atoms of the aluminosiloxane. (See Specification, page 3, paragraph 0014). Claim terms must be read not in a vacuum, but in light of the Specification. *Allen Archery Inc. v. Browning Mfg. Co.*, 819 F.2d 1087, 2 U.S.P.Q.2d 1490, 1494 (Fed. Cir. 1987). When read in light of the Specification, the term "partially halogenated aluminosiloxane" clearly signifies that only a portion of the aluminosiloxane molecule to which the claim language refers is halogenated. Thus this rejection also fails to establish a *prima facie* case of indefiniteness and should be reconsidered and withdrawn.

Rejection under 35 U.S.C. 102(b)

Claims 1-15, 18-23, 27, and 28 stand rejected under § 102(b) as anticipated by Aida et al. (U.S. 5,556,821). This rejection is respectfully traversed. For the record, Applicants believe that the word "not" was accidentally omitted on Page 7 of the Office Action, where the § 102 rejection is described, and should read "Although Aida does not expressly teach the constituent (6) to be the haloaluminosiloxane of the instant claims, one of ordinary skill in the art would have expected that the contacting product of constituent (6) would be inherent." (Emphasis added.)

Nothing presented in the § 102 rejection, nor anything in Aida et al., meets the standard for anticipation by inherency. The standard for anticipation by inherency is that the feature must be present, regardless of its recognition by one of ordinary skill in the art. *Schering Corp. v. Geneva Pharmaceuticals*, 339 F.3d 1373, 1377-78 (Fed. Cir. 2003). Still, anticipation by inherency has another requirement which is not met by Aida et al. This requirement is that the inherent feature must necessarily be present in the prior art. *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993). Haloaluminosiloxanes are not necessarily present in the disclosure of Aida et al. Not all of the fluorinating agents disclosed in Aida et al. can form haloaluminosiloxanes of the present invention. In particular, hexafluorobenzene, a particularly preferred fluorinating compound in Aida et al. (column 13, lines 14-30), does not form haloaluminosiloxanes of the present invention (Specification, Page 57, paragraph 0158). In fact, Applicants have repeated Example 1 of Aida et al., and no haloaluminosiloxane was detected in the product mixture. The description of this experiment is included in attached Exhibit A. If required, a Declaration regarding this experiment can be supplied. Thus, haloaluminosiloxanes are not necessarily present in the disclosure of Aida et al., and Aida et al.

therefore cannot anticipate the present invention by inherency. On the basis of the foregoing, the rejection of the claims, including generic Claim 1, over Aida et al. fails to establish a *prima facie* case of anticipation and should be withdrawn.

Rejection under 35 U.S.C. 103(a)

Claims 1-15, 18-23, 27, and 28 stand rejected under section 103(a) as allegedly obvious over Aida et al. The sole basis for this rejection is the Examiner's assertion that "it appears that the claimed subject matter is within the generic disclosure of the prior art and is expected to work." (Office Action, page 7-8.) This rejection is respectfully traversed. First and foremost, that the present invention appears to be "within the generic disclosure of the prior art and expected to work" is not the standard for determining obviousness. It is well-settled that the standard is whether the claimed invention would have been obvious to one of ordinary skill in the art at the time the invention was made. Still further, there must be some suggestion or motivation to modify the cited reference, which motivation or suggestion is to be pointed out by the Examiner. *In re Fritch*, 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780, 1783-84 (Fed. Cir. 1992) (quoting *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125 (Fed. Cir. 1984)). It is noted that the Federal Circuit has observed that the level of skill in the art rarely supplies the suggestion to modify the reference. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 1324, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999). There is absolutely no assertion or showing in the Office Action with regard to any motivation or teaching within the prior art which would lead one of ordinary skill in the art to arrive at the presently claimed invention.

The Examiner's statement that the present invention seems to be within the generic disclosure of the prior art suggests that this rejection is actually a genus-species rejection. If this is the case, there is nothing in Aida et al. that suggests the selection of an order of addition and/or an appropriate reagent to arrive at the present invention. Aida et al. indicates that the order for contacting the reagents is not important, stating at column 14, lines 6-8 that "As to in what order these constituents should be contacted, there is no special limitation." From column 14, line 8 to column 15, line 2 of Aida et al., there are listed ten different ways of contacting the reagents (A-D and a-f) along with a large number of variations thereon (E through S and g through r). A preference for method C is indicated (column 15, lines 2-5). Thus, nothing in Aida et al. suggests that method D (which produces constituent (6)) should be chosen, nor that method D would lead to the formation of a product different from the products of any of the other methods described. Regarding the halohydrocarbon halogenation agents, Aida et al. does not teach or suggest any reason or motivation for choosing the

halogenating agents of the present invention. In fact, it is difficult to understand how it would have been obvious to one of ordinary skill in the art to select the halohydrocarbon halogenation agents of the claimed invention, from a list of halogenating agents spanning seven columns in Aida et al. (columns 7-13) to arrive at the present invention, particularly when Aida et al. specifically states a preference for those agents of general formulae II and III (column 13, lines 14-15; see column 10, lines 1-12 for definitions of general formulae II and III). Thus it would have been difficult or impossible for one of ordinary skill in the art to successfully select both a halogenation reagent and an order of addition that would lead to the present invention, especially in the absence of any motivation or suggestion for doing so. In summary, there is nothing in Aida et al. which teaches or suggests the present invention, and the § 103 rejection of Claims 1-15, 18-23, 27, and 28 over Aida et al. should be withdrawn.

Applicants presume that the statement regarding the "polymers of the prior art examples" on the bottom of Page 7 of the Office Action actually refers to the catalysts produced in the Examples of Aida et al., especially as the polymerization process claim (Claim 58, Group V) has been subjected to restriction and withdrawn from further consideration by the Examiner. If Applicants' understanding is misplaced, clarification of the Examiner's statement within the context of a non-final action is respectfully requested.

As the discussion turns to the Requirement for Restriction, it is respectfully pointed out that the Examiner stated in Paragraph 5 of the Office Action that the "product claim will be examined with the elected invention." The product claim referred to is believed to be Claim 55 of Group III, and Claim 55 does not appear to have been examined with Claims 1-15, 18-23, 27, and 28. Claim 55 is among the claims withdrawn from further consideration, both on form PTOL-326 and in Paragraph 12 of the Office Action. Applicants maintain that Claim 55 is allowable over the cited reference for the reasons just discussed for Claims 1-15, 18-23, 27, and 28.

Requirement for Restriction

Applicants respectfully traverse the Requirement for Restriction in its entirety, and, in the event it is necessary, affirm the preliminary election of Claims 1-32, referred to as Group I in a telephone conversation on March 22, 2005, between John Sieberth and the Examiner (as opposed to those which were referred to as Group II, Claims 33-58). The election of the siloxane species as halogenating agent, while traversed, is also affirmed.

Because the generic claim is allowable, as just discussed above, the Requirement for Restriction should be rescinded and the withdrawn claims restored to the application.

Regarding Paragraph 1 of the Office Action, where the Groups for restriction are listed, Applicants assume that the listing of Claims 1-54 in Group II is a typographical error, and that Group II actually includes Claims 33-54. For completeness, the Groups, the claims in each group, and their proposed class/subclass assignments are set forth in the following Table.

Group	Claims	Class/subclass	Drawn to
I	1-32	556/179	haloaluminoxane
II	33-54	556/180	process for making haloaluminoxane
III	55	502/103	catalyst composition (product)
IV	56-57	502/104	process of making catalyst
V	58	526/165	polymerization process (process of using catalyst)

Regarding Paragraph 2 of the Action, Applicants wish to point out for the record that one would have to use certain ratios of halogenated organoaluminum compound to organoaluminum compound in a hydrolysis in order to form a haloaluminoxane composition of the present invention, which has about 0.5 mole% to about 15 mole% halogen atoms. Merely hydrolyzing a halogenated organoaluminum compound, as suggested by the Examiner, will not necessarily form a haloaluminoxane composition of the present invention.

In Paragraph 5 of the Action, it is presumed that the reference to the product is that of the claim in Group III. As discussed above, Applicants disagree with the Examiner's position that the product is not *allowable*, and thus believe that restriction is not proper between Groups IV and V. Further, 37 C.F.R. 1.141(b) states that

Where claims to all three categories, product, process of making, and process of use, are included in a national application, a three way requirement for restriction can only be made where the process of making is distinct from the product. If the process of making and the product are not distinct, the process of using may be joined with the claims directed to the product and the process of making the product *even though* a showing of distinctness between the **product** [Group III] and **process of using the product** [Group V] *can* be made. (Emphases added.)

No distinctness between Groups III (product) and IV (process of making) has been pointed out by the Examiner. Thus, this regulation does not allow a three-way Requirement for Restriction of Groups III, IV, and V, and Applicants respectfully request the withdrawal of at least this portion of the Requirement for Restriction.

Regarding Paragraphs 6-8 of the Action, the classifications of the claims in certain Groups are not very different (see above Table), and the claimed subject matter is not "divergent," as the Examiner suggests. The claims of Group I are in class/subclass 556/179, while those of Group II are in class/subclass 556/180. Similarly, the claims of Group III are in class/subclass 502/103, while those of Group IV are in class/subclass 502/104. Clearly, these two sets of Groups are not as different as the Examiner's statement would suggest. In this connection, it is worth noting that the examined claims, which are in Group I (class 556), were rejected using a reference (Aida et al.) which is in class 502, the same class as Groups III and IV.

The claims, including generic Claim 1, are submitted to be allowable. Thus, reinstatement of the withdrawn claims is proper, and requested by Applicants. Should any withdrawn and unexamined claims be brought back into consideration, the remarks regarding the novelty and nonobviousness of the examined claims over Aida et al. apply equally regarding such withdrawn and unexamined claims.

In light of the foregoing remarks, the case is believed to be in condition for allowance. Prompt notification to this effect would be sincerely appreciated.

If any matters remain that require further consideration, the Examiner is requested to telephone the undersigned at the number given below so that such matters may be discussed, and if possible, promptly resolved.

Please continue to address all correspondence in this Application to Mr. Edgar E. Spielman, Jr. at the address of record.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that in accordance with standard business practice, this paper (along with any referred to as being attached or enclosed) is to be deposited on the date shown below with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

JUNE 29, 2005

Date



Exhibit A

Repeat of Example 1 of Aida et al. (reaction of C_6F_6 with a mixture of MAO and Cp_2ZrCl_2)

To a 20 mL vial were charged Cp_2ZrCl_2 (64.3 mg, 0.22 mmol, Aldrich) and MAO (methylaluminoxane, 10%; 6.6 g, 4.5 Al%, 11 mmol Al, Albemarle Corporation; Al:Zr = 50:1), following by vigorously shaking. An orange solution was obtained. To this solution was added neat C_6F_6 (40.9 mg, 0.22 mmol, Aldrich; Zr: C_6F_6 = 1:1) at once. The color remained orange. This solution was divided into two portions. One portion was heated at 60°C in an oil bath for 30 minutes. After one hour, the two solution were sampled, and analyzed by ^{19}F NMR on a Bruker DPX 400 instrument (400 MHz, 25°C, C_6D_6) with $\frac{1}{4}$ volume C_6D_6 as the lock solvent, 5 second delay time (D1), and 128 scans (NS) to detect low concentrations of Al-F species. The two solutions were then aged for 5 days at ambient conditions, sampled again, and again analyzed by ^{19}F NMR analysis using the same set of acquisition parameters under the same conditions. The ^{19}F NMR spectrum still showed C_6F_6 at -164 ppm as a sharp peak; no Al-F species, which appear as a broad peaks at about -140 ppm, were observed within the detection limits of the NMR instrument.

Under the conditions used for ^{19}F NMR analysis, the reaction of as little as 3% of C_6F_6 with MAO to form Al-F species can be detected. The current ^{19}F NMR method can detect as little as 0.007 wt% F of Al-F species in solution. The concentration of C_6F_6 in this experiment was 0.22 mmol per 6.7 g solution, which contains 0.37 wt% F. After addition of $\frac{1}{4}$ volume of C_6D_6 as the lock solvent, the concentration was changed to ($\frac{3}{4}$ x 0.37 wt% F) or 0.28 wt% F. If 3 % or more C_6F_6 reacts with MAO to form Al-F species, the fluorine concentration of the Al-F species should be about 0.28 wt% x 3% = 0.0084 wt% and should be detected.